CWA 401 Water Quality Certification Request

version 2.15

(Submission #: HQH-3SZS-41B2R, version 1)

Details

Site: Graphite Creek Project

Submission ID HQH-3SZS-41B2R

Form Input

Form Instructions

Form Instructions

Instructions for filling out the 401 Prefiling Meeting Request Form are located on the Alaska DEC website at the link below.
401 Prefiling Meeting Request Form Instructions

Agents: For Delegation of Authority to act on behalf of the applicant in processing the application, use the following form, have signed, and upload with application.

- Delegation of Authority - 401 Application

Contact Information (1 of 3)

Required Contacts

The following **Contact Roles are *REQUIRED***. Please select the appropriate role(s) for each contact and complete the contact details. Multiple role(s) may be assigned to each unique individual.

- **Applicant** (Responsible Party)
- **Billing Contact**

Contact Role(s)
Applicant
Billing Contact

Contact

Prefix
Mr.

First Name	Last Name
Michael	Schaffner

Title
Sr. Vice President of Operations

Organization Name
Graphite One (Alaska), Inc.

Phone Type	Number	Extension
Business	775-304-5412	

Email
mschaffner@graphiteoneinc.com

Mailing Address

471 W. 36th Ave, Suite 100

Anchorage, AK 99503

USA

Contact Information (2 of 3)

Required Contacts

The following **Contact Roles are *REQUIRED***. Please select the appropriate role(s) for each contact and complete the contact details. Multiple role(s) may be assigned to each unique individual.

- **Applicant** (Responsible Party)
- **Billing Contact**

Contact Role(s)
Agent

Contact

Prefix
Mr.

First Name	Last Name
Simon	Wigren

Title
Project Manager

Organization Name
HDR Alaska, Inc

Phone Type	Number	Extension
Mobile	907-980-1901	

Email
Simon.wigren@hdrinc.com

Mailing Address

582 E 36th Avenue, Suite 500

Anchorage, AK 99503

United States

Contact Information (3 of 3)

Required Contacts

The following **Contact Roles are *REQUIRED***. Please select the appropriate role(s) for each contact and complete the contact details. Multiple role(s) may be assigned to each unique individual.

- **Applicant** (Responsible Party)
- **Billing Contact**

Contact Role(s)
Application Preparer

Contact

Prefix
NONE PROVIDED

First Name	Last Name
Beth	Elliott

Title
Permitting Specialist

Organization Name
HDR Alaska, Inc

Phone Type	Number	Extension
Mobile	907-245-0566	

Email
Beth.Elliott@hdrinc.com

Mailing Address

582 E 36th Avenue, Suite 500

Anchorage, AK 99503

United States

Project / Facility Site Info

Identify the applicable federal license or permit

A copy of the federal permit or license application is required to be submitted with the request for the water quality certification. (18 AAC 15.130, 18 AAC 15.180)

Federal Agency
Army Corps of Engineers (USACE)

Permit License Number (ex. USACE: POA-XXXX-XXXX; FERC: FERC-xxxx-xxxx; EPA: AK#######)
POA-2018-00210

Project Name or Title
Graphite Creek Project

Primary Receiving Waterbody Name
Imuruk Basin

Estimated Project Dates (+/- 30 days)

Project Estimated Start Date	Project Estimated End/Completion Date
06/01/2027	06/01/2047

Approximate date(s) when any Discharge(s) may commence (+/- 30 days)

Description	Discharge Estimated Start Date	Discharge Estimated End Date
NONE PROVIDED	*NONE PROVIDED*	*NONE PROVIDED*

Project Description (Nature of Activity, include all features)
The proposed project would permanently discharge approximately 16,400 cubic yards (cy) of fill material into 2.21 acres of waters including wetlands that have been asserted by the applicant as jurisdictional and requiring permitting under Section 404 of the Clean Water Act. The project would also incur temporary impacts to 0.39 acres of applicant-determined jurisdictional waters. The total extent of permanent impacts to wetlands and other waters would be 414.68 acres and the total extent of temporary impacts to wetlands and other waters would be 1.18 acres. In addition, approximately 12,440 linear feet of stream would be diverted into artificially constructed channels away from the mine site. The total extent of jurisdictional waters that would be impacted by the discharge of fill is unknown at this time and will be determined by completing an approved jurisdictional determination.

Mine Site
Construction of the mine pit and facilities would involve the permanent discharge of fill into 0.21 acres of waters (predominantly streams) and 0.13 acres of wetlands asserted by the applicant as jurisdictional. A total of 381.2 acres of waters including wetlands would be permanently eliminated within the 1,176.0-acre footprint of the mine site. A total of 0.12 acres of applicant-asserted jurisdictional waters would be temporarily filled via construction of the access ramp for the construction staging pad along the edge of the Imuruk Basin.

The mine site would include the mine pit, a processing plant, a waste management facility (WMF), a water treatment facility, electrical power generation and distribution, fuel storage and dispensing, explosive and emulsion storage, a helipad, and roads (not including the access road). Additionally, it would include administration offices, warehousing, a metallurgical lab, a crusher, a mill, tailing filtration and thickening, concentrate loading, a truck shop, parts storage, a wastewater (sewage) treatment plant, a drinking water well, emergency accommodations for employees, concentrate container storage, and emergency response. The mine would operate 365 days per year, 24 hours per day.

Mining would occur via open pit mining using conventional drill, blast, load, and haul to deliver ore to a crusher where the ore process begins. The mine is designed to deliver up to 11,000 tons of ore daily. With a life-of-mine strip ratio of 3.2:1, on average, approximately 35,400 tons of waste would also be handled daily. The overall size and design of the pit was based on open pit economic optimization and geotechnical considerations.

Mine facilities would be shipped as modularized units to the Port of Nome for transport to the mine. The facility modules and mine construction equipment would be brought to the mine either via the new access road or barged to the construction staging pad via the Imuruk Basin.

The buildout of the mine site would occur in three distinct development phases. Phase 1 would occur within the first five years; Phase 2 would occur from Years 6 through 12; Phase 3 would occur from Years 13 through closure. These phases are closely linked to the water management strategy and are intended to minimize contact water generation throughout the life of the mine. The largest infrastructure element, and the one driving all others, would be the WMF. The first phase of the WMF, mill facility construction and initial pit development, would involve the most land disturbance.

To reduce the quantity of contact water and reduce the need for pit dewatering, Graphite Creek would initially be diverted downslope (north) of the mine pit during the establishment of the first phase of the WMF. The surface diversion would take the flow from Graphite Creek to the Glacier Canyon Creek channel west of the WMF final footprint. Once the mine pit progresses to Graphite Creek, an upstream diversion structure would be constructed to redirect creek flows around the pit and all operational areas into Glacier Canyon Creek to the west. North of the pit, Lower Graphite and Ruby Creeks would be conveyed in a diversion that would flow south and west around the WMF. Glacier Canyon Creek would flow into this diversion with Lower Graphite and Ruby Creeks, then flow northward into the original Glacier Canyon Creek channel north of the mine facilities. A total of 12,440 feet of stream would be diverted at full buildout. Additionally, five culvert crossings would be established for roads within the mine site.

The processing plant would use crushing, grinding, and flotation processes. A jaw crusher would reduce ore, which would then be conveyed to a covered stockpile. The crushed ore would then be conveyed to a semi-autogenous grinding mill. Ground ore would pass through seven stages of flotation and three stages of regrinding, producing a 95 percent pure graphite concentrate. The concentrate would be dewatered and dried before being placed in fully enclosed shipping containers for truck transport to Nome.

A process water pond would support operational needs at the mill and capture runoff from the mill area. Sediment basins would be constructed to settle out sediments in the runoff from the mill area before it enters the process water pond. The process water pond would be hydraulically linked with the water treatment ponds to maintain the balance between re-use and treatment.

The waste management facility would store both waste rock material (non-ore) from the pit and tailings (coarse and fine) produced from the milling operation. The fine, wet tailings would be stored in a conventional tailings pond that would be constructed within the WMF. The dam for the tailings pond would be built in stages using compacted waste rock material and coarse tailings. Upon filtering and drying to 8-12 percent moisture content, the coarse tailings would be co-mingled with waste rock as dry-stack storage. Co-mingling and compaction would occur in the WMF using heavy equipment, such as dozers, roller compactors, and graders. The objective of the co-mingling strategy is to create blended, compacted, low-permeability material. Placement of co-mingled material over the life of the operation would result in a very large, stabilizing buttress adjacent to the tailings dam. The WMF would be constructed in multiple stages, and contemporaneous closure activities would be used wherever practical.

The tailings pond would be constructed during the initial stage of WMF development. The elevation of the dam would be raised over time, as operations progress and more tailings storage is needed. Wet tailings would be pumped from the processing pad to the

tailings pond by a pipeline. Approximately 25 to 30 percent of the milled material is expected to be diverted to the wet tailings pond for disposal.

A high-density polyethylene (HDPE) or clay basin liner would be installed under the WMF prior to material placement. Additionally, the inside slope of the tailings dam would be lined. An underdrain system would be installed with the WMF. This system would assist in transporting water that drains through the co-mingled material to collection sumps that would deliver this water to the water management ponds. Water from the collection pond would either be recycled for use at the mill or treated for discharge.

Water management facilities would include water management ponds, a water treatment plant (WTP), diversion ditches, contact water ditches, stormwater settling structures, and a diversion structure for Graphite Creek above the mine pit. Water management ponds would be used to store water that runs off from within the mine (contact water) and settle sediments prior to recycling or treatment. The WTP would treat all contact water to State of Alaska standards prior to discharging to Glacier Canyon Creek. The WTP would use precipitation, flocculation, settling, filtration, and reverse osmosis processes prior to discharge. Monitoring wells would be installed downgradient of the WTP and within Glacier Canyon Creek to detect any changes in water quality that may result from the mining operation.

Diversion ditches along the mine site perimeter would route surface runoff away from site facilities so that surface water remains unaffected by project activities. Graphite Creek would require diversion in Year 1 of mine operations to allow for the tailings pond construction and once again in Year 5 when the pit footprint encroaches on this non-fish bearing stream. A diversion structure would be constructed uphill from the mine site to convey water in a pipeline that would discharge the flow into Glacier Canyon Creek west of the pit footprint. With the exception of supporting very few slimy sculpin (Cottus cognatus) on an intermittent basis, Glacier Canyon Creek is also non-fish bearing and is the natural ultimate discharge point of Graphite Creek. Small sections of other streams in the mine footprint would also be diverted away from the mine and into artificially constructed channels that would lead to natural channels downstream.

Due to lack of other power sources within the region, diesel powered generators would be used to provide electrical power at the mine site. These generators would be located on the same pad as the processing plant. Fuel for power generation, concentrate drying, and mobile equipment would be trucked from a bulk fuel tank farm in Nome. Two weeks of fuel storage would be located at the Project site in a double-walled, 850,000-gallon, steel tank. The fuel tank would be located within a containment structure adjacent to the power generation facility. A fueling station and 4,000- gallon gasoline tank for light vehicles would be co-located in the containment.

Construction Staging Pad
A 5-acre gravel staging pad and temporary access ramp would be constructed near Imuruk Basin to support mine site construction, mine facility staging and transport, access road construction, and bulk ore sample shipment. This staging pad and temporary ramp would be developed in coordination with the landowner, Bering Straits Native Corporation, who would lease the site to Graphite One for use during the Project construction phase. As mentioned above, a total of 0.12 acres of applicant-asserted jurisdictional waters would be temporarily filled via construction of the access ramp.

The gravel fill to construct the staging pad would likely be sourced from Brevig Mission and brought to the site by barge via the Imuruk Basin. The temporary ramp would be constructed using mats and clean gravel to allow vehicles equipped with low-pressure tires to transport the construction equipment and modules to the staging pad. It is expected that the ramp would be in place for less than three years. Once the construction equipment and mine facility modules are transported to the mine, the temporary ramp would be removed. The area within the temporary ramp would be re-contoured to preconstruction conditions.

Graphite One would use a shallow-draft barge or landing craft, which can be moored on the shoreline of Imuruk Basin, to offload and store construction equipment and modularized mine facilities during the open-water season. Equipment and facility modules would be staged on the gravel pad until winter, when an approximately four-mile long ice and snow road could be constructed to transport these materials to the mine. The staging pad would also be used to store a bulk ore sample from the mine until the following open water season for barging to the Port of Nome.

Access Road
Construction of the access road would involve the permanent discharge of gravel fill into 1.27 acres of waters (predominantly rivers and streams) and 0.20 acres of wetlands asserted by the applicant as jurisdictional. A total of 33.5 acres of waters including wetlands would be permanently eliminated within the 568.2-acre footprint of the access road and associated material sites. A total of 0.27 acres of applicant-asserted jurisdictional waters would be temporarily filled via construction of the temporary bridge access roads and placement of the temporary piles for trestles during bridge construction.

The access road would begin at approximately Milepost 30 of Kougarok Road, north of Nome, and traverse through Mosquito Pass to the mine site. The access road would be used to transport graphite concentrate to the existing road system in custom, polymer-lined, 20-foot shipping containers with a net capacity of 21 tons. A single truck would haul two graphite concentrate containers at a time. The access road has been designed to meet American Association of State of Highway Traffic Officials (AASHTO) standards for design speed or specialized carrier requirements for oversized loads. The road would be built across land owned by the Alaska Department of Natural Resources (ADNR) and may be closed to the public for vehicle access. ADNR would make the final determination on public vehicle access and use of the roadway.

The access road surface would be 28 feet wide to accommodate two-way traffic, with side slopes that range from 2:1 to 3:1 (horizontal to vertical). To insulate the permafrost and thereby construct a stable road, the fill for the road would be typically 10 feet thick; the road surface would be typically 10 feet above the ground surface. In locations with soft spots or poor underlying material, additional road prism borrow or geo-fabric may be required. A dust palliative such as calcium chloride may be mixed in with the crushed aggregate surface course material to control dust.

Typical road construction methods would be used to construct road segments in wetlands. Construction would consist of clearing, grubbing, and placing fill; blasting existing rock, in some cases; and/or excavating existing material to reach the proposed design grade. The overall embankment width would generally vary from 50 to 80 feet. The construction limits would include a 20-foot buffer on either side of the toe of slope to account for temporary activities during construction, such as vegetation clearing and/or equipment operating. With the construction limits, the overall disturbance footprint would range between 100 to 120 feet. No grubbing would occur within the temporary disturbance limits, and vegetation would be cleared above the ground surface.

Locally sourced material extracted from several proposed gravel borrows and rock quarry sites along the route would provide the vast majority of the material needed for road construction. Road construction would typically entail fill placement over native soils. However, cut-to-fill road construction would occur in areas with substantial side slopes and suitable subgrade conditions.

Several streams would be traversed by the access road. Table 1 divides the stream crossings by stream width category and shows the number of streams that would be crossed by culverts and bridges and the number of streams that support anadromous fish or only resident fish (streams that only support fish species that complete their entire life cycle within the stream). Crossings would be accomplished with culverts or bridges, depending upon the ordinary high water (OHW) stream widths, stream characteristics, and various topographic considerations.

Most of the stream crossings along both the access road and within the mine (outside the pit) would be accomplished with culverts ranging from 3 feet to 55 feet wide. As part of the design effort, culvert crossings were categorized based on stream width and fish presence, as shown in Table 2. Culverts in categories #4 and #7 would be placed in streams that do not support fish as determined by baseline monitoring that began in 2018. There are no streams within the project area that require installment of culverts in category #5.

The same approach to culvert design would be followed for the five culvert crossings needed at the mine site. Where the access road would cross seasonally flowing drainages and wetlands, minor culverts consisting of corrugated metal pipe with a minimum diameter of 3 feet would be installed to maintain hydrological connectivity and prevent ponding immediately adjacent to the road.

Full span bridges would be constructed across six named rivers, each of which is over 25 feet in width at OHW. Table 3 lists these bridge crossings and their key details. All bridges would be designed as steel plate girder bridges with a concrete deck. The bridges would be designed for 80-ton capacity and have overall width of 16 feet.

Mine Closure and Reclamation
After mining operations conclude, the site would transition into final reclamation and closure activities. All facilities and foundations at the mine site would be demolished and removed. The debris would be disposed in the final pit and covered in accordance with Alaska mining regulations. The last phase of the WMF would also be regraded and fully closed. The haul roads, access roads, and facility pads would be dismantled and regraded to approximate original contours. Topsoil material that was salvaged during operations would be spread on the regraded areas where suitable and reseeded according to permit requirements. The Graphite Creek diversion structure would remain in perpetuity and would require intermittent maintenance.

Due to the site&#65533;s remote location, all reclamation activities would be self-performed using the equipment fleet that supported the mining operation. Given the relatively small size of the operation and reclamation activities of the WMF that would occur during the life of the mine, it is assumed that the demolition and most reclamation activities would be completed in approximately one year. WMF reclamation during the life of the mine would include closing sections of the WMF once they are no longer needed, draining down surface water, backfilling the basin with brines and mine waste up to final grade, and installing a cover liner. The cover liner would be covered with growth media and revegetated.

Project Purpose (Describe the reason(s) for discharge)
Graphite One's purpose is to mine graphite from their mineral leases on State of Alaska land and to process the graphite into commercially viable ore concentrate for transport to the Port of Nome via a proposed, new 17.3-mile gravel access road and the existing Seward Peninsula public road system.

Is any portion of the work already complete?
No

Description of current activity site conditions
The Project property consists of 176 active State of Alaska mining claims. The northern edge of the Project property borders the Imuruk Basin, a shallow tidal body of water that flows through the Tuksuk Channel out to Grantly Harbor, then to Port Clarence and the Bering Sea. The project access road would begin at Milepost 30 of the Kougarok Rd, north of Nome and traverse through Mosquito Pass to the mine site. The Project is located entirely on State of Alaska lands. The project property is mostly undisturbed land.

Relevant Site Data, Photographs that Represent Current Site Conditions, or other Relevant Documentation
Graphite One COE Public Notice PD.docx - 11/14/2025 01:48 PM
Comment
NONE PROVIDED

Is this a linear project? (i.e., utility line, road, etc.)
No

Project Address

[NO STREET ADDRESS SPECIFIED]

[NO CITY SPECIFIED], AK *[NO ZIP CODE SPECIFIED]*

Visit the link below to help with conversion between DMS and Latitude/Longitude
DSM - Lat/Long converter

Project Location
65.03795,-165.54258

Visit the following link if you need to convert the lat/long to get the **PLSS information**
Converter for Section, Township, and Range

PLSS Location (Public Land Survey System)

State Tax Parcel ID	Borough/Municipality	Meridian	Section	Township	Range
NONE PROVIDED	Nome Census Area	Kateel River	15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28, 35, 36	5 South	34 West
NONE PROVIDED	Nome Census Area	Kateel River	1, 2, 11, 12, 13, 14, 23, 24, 25, 26	6 South	34 West
NONE PROVIDED	Nome Census Area	Kateel River	6, 7, 14, 15, 16, 17, 18, 23, 24	7 South	33 West
NONE PROVIDED	Nome Census Area	Kateel River	1	7 South	34 West

Directions to Site
The start of the road to the mine site is located at Milepost (MP) 30 of the Kougarok Road. From Nome: head east out of Nome on the Council Road for 0.55 miles. Turn left onto Beam Road which becomes the Kougarok Road (Nome-Taylor Highway). Continue for 30 miles.

Federal Agency Contact (1 of 1)

Have you been working with anyone in the Federal Agency?
Yes

Federal Contact Role
USACE

Federal Agency Contact

First Name Greg
Last Name Mazer

Title
Project Manager

Organization Name
USACE

Phone Type	Number	Extension
Other	907-347-9059	

Email
Gregory.j.Mazer@usace.army.mil

Dredge Material to be Discharged

Is dredging involved?
No

Tier Analysis

A tier analysis is comprised of a layered approach to determine the need for testing the dredge material to aid in generating physical, chemical, toxicity and bioaccumulation information, but not more information than is necessary to make factual determinations.
The tier analysis is a series of tiers (I – IV) or levels of intensity (and cost) of investigation. It is necessary to proceed through the tiers only until information is sufficient to make factual determinations, no further testing is required.

- **Tier I - Site Evaluation and History**. The initial tier (Tier I) uses readily available, existing information (including all previous testing). For certain dredge materials with readily apparent potential for environmental impact (or lack thereof), information collected in Tier I may be sufficient for making factual determinations.
- **Tier II - Chemical Testing** is concerned solely with sediment and water chemistry.
- **Tier III - Biological Testing (bioassay and/or bioaccumulation testing)** is concerned with well-defined, nationally accepte toxicity and bioaccumulation testing procedures.
- **Tier IV - Special Studies** allows for case-specific laboratory and field testing, and is intended to for use in unusual circumstances.

For more information regarding a Tier analysis, see below references

- EPA Inland Testing Manual
- USACE Seattle District Civil Works DMMP User Manual

Fill Material to be Discharged

Will Fill Material be Discharged?
Yes

For fill material, identify the material source
Locally sourced material extracted from material sites along the route and imported material from nearby communities, as needed.

Types of material being discharged and the amount of each type (cubic yards)

Type	Cubic Yards
Embankment Borrow	4,268.0
Road Prism Borrow	10,669.0
Surface Course	533.0
Stream Bed Material	1,950.0
Rip Rap	920.0

Surface area in (acres or linear feet) of wetlands or other waters filled

Surface Area	Units
2.21	Acres

Discharge Location Information (1 of 4)

Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters

Discharge Location ID (001, 002, 003, - increment by one)
001

NOTE: if you have a receiving water that is Wetlands, just enter the generic term "Wetlands". Do not enter "Wetlands of Tanana River", for example.

Please select 'Other' if your waterbody is not in the list below.
You can start typing the name of the waterbody to filter the list.

Receiving Waterbody / Wetlands Name
Cobblestone River

Discharge Location
65.02829330599421,-165.4841493606526

Discharge Location Information (2 of 4)

Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters

Discharge Location ID (001, 002, 003, - increment by one)
002

NOTE: if you have a receiving water that is Wetlands, just enter the generic term "Wetlands". Do not enter "Wetlands of Tanana River", for example.

Please select 'Other' if your waterbody is not in the list below.
You can start typing the name of the waterbody to filter the list.

Receiving Waterbody / Wetlands Name
Nome River

Discharge Location
64.86781634989684,-165.26296367644895

Discharge Location Information (3 of 4)

Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters

Discharge Location ID (001, 002, 003, - increment by one)
003

NOTE: if you have a receiving water that is Wetlands, just enter the generic term "Wetlands". Do not enter "Wetlands of Tanana River", for example.

Please select 'Other' if your waterbody is not in the list below.
You can start typing the name of the waterbody to filter the list.

Receiving Waterbody / Wetlands Name
Imuruk Basin

Discharge Location
65.05979931237101,-165.64692726134885

Discharge Location Information (4 of 4)

Identify the location and nature of any potential discharge that may result from the proposed project and the location of

receiving waters

Discharge Location ID (001, 002, 003, - increment by one)
004

NOTE: if you have a receiving water that is Wetlands, just enter the generic term "Wetlands". Do not enter "Wetlands of Tanana River", for example.

Please select 'Other' if your waterbody is not in the list below.
You can start typing the name of the waterbody to filter the list.

Receiving Waterbody / Wetlands Name
Sinuk River

Discharge Location
64.87875002004215,-165.44732799529575

Other Pollutant Sources

Contaminated Site Information

Determine if your project is **within 1,500 feet** of a known Alaska DEC Contaminated Site. See the *Alaska DEC Contaminated Web Map* below. This will help you to identify if any potential pollutants/parameters of concern may be present on your project site., see DEC's website:

- **Contaminated Sites Web Map**
- **Contaminated Sites Database Search website**

Is the project within 1,500 feet of a known contaminated site?
No

Parameters of Concern that may be present in discharge

Parameter(s) of Concern

Identify the parameters of concern that may be present in your discharge from the dredge and/or fill material.

Note, **TURBIDITY** and **SEDIMENT** are routine parameters associated with dredge and/or fill activities.

Consider if other parameters may be present from past activities in the area such as contamianted site data, impaired waters or other relevant water quality data, or other parameters of concern identified during the application process.

Parameter(s)
Turbidity
Sediment

If known, describe respective concentrations, persistence, and potential impacts to the receiving water and data on parameters that may alter the effects of the discharge to the receiving water
The project has been designed to avoid and minimize impacts to receiving waters through avoidance and minimization measures such as route refinement, construction methods, siting of Project components, and appropriately sized conveyance structures. A Stormwater Pollution Prevention Plan will be prepared prior to the start of construction and will include Best Management Practices and mitigation measures to limit impacts to receiving waters from sediment and turbidity.

Impaired Waters

An ***impaired waterbody*** are those listed as a **Category 4 [304(b)] or Category 5 [303(d)]** in the current EPA approved *Alaska's Integrated Water Quality Monitoring and Assessment Report.*

For the most recently *Approved Integrated Water Quality Monitoring And Assessment Report (Integrated Report)*, see DEC's website:

- **Integrated Water Quality Monitoring And Assessment Report** https://dec.alaska.gov/water/water-quality/integrated-report

Does a discharge of any parameter identified above occur to an impaired waterbody?
No

If determined necessary and requested by the Department, submit sufficient and credible baseline water quality information for the receiving water which meets the requirements of 18 AAC 70.016(a)(6)(A-C).

Avoidance & Minimization BMPs and Mitigation Measures

Describe how impacts are being avoided and minimized on the project site. Include best management practices (BMPs) for sediment and erosion controls that will be implemented to minimize environmental impacts, and any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge.

Include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge
Stormwater pollution prevention control measures would be implemented during construction. A Storm Water Pollution Prevention Plan would be prepared prior to the start of construction.
- Areas where grading and fill would occur would be stabilized using appropriate BMPs and revegetated with native seed mix within the first growing season following the work.
- Erosion control techniques would be used to prevent siltation and erosion that would be more likely to occur snow melt or high rainfall events.
- Appropriate measures, including working during low-flow and winter periods, would be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable.
- Sloping of site containment would be used to direct all spills and/or leachate in contaminated soil to a catchment pond.

Avoidance Measures
The following actions would be taken to avoid adverse impacts to wetlands and other waters:
• All mine facilities have been sited within the Graphite Creek and Glacier Canyon Creek drainages to avoid potential impacts to the Cobblestone River and other fish bearing streams.
• At the processing facilities pad, the crushed ore stockpile would be covered to eliminate effects from dust after the mined rock has been crushed.
• Most of the mine tailings would be dry-stacked and co-mingled with waste rock to reduce the size of the tailings pond.
• There would be no permanent facilities located on the shoreline of Imuruk Basin.
• No vehicles or equipment would be fueled or serviced within 100 feet of wetlands or fish bearing streams. Fuel would be stored a minimum of 100 feet from any wetland or waterbody.

Minimization Measures
The proposed mine layout has been minimized to the greatest extent practicable given the project purpose.
• The proposed road alignment is routed to minimize unavoidable impacts on waters, especially those supporting anadromous fish species, to the extent practicable and in consideration of design criteria constraints.
• The proposed access road alignment would be routed so stream crossings are as close to perpendicular to the axis of the channel as engineering and routing conditions allow to minimize culvert and bridge length as well as reduce stream impacts.
• Properly sized and designed culverts and bridges would be constructed in appropriate locations to maintain the natural flow patterns and timing of surface water inflows to adjacent wetlands and waters.
• Culverts would be sized to reduce maintenance associated with debris clogging, icing, ponding, and sediment deposition.
• Properly sized and designed culverts would be installed to minimize impacts to fishbearing streams and all anadromous fish stream crossings would be permitted
according to ADF&G Title 16 guidelines.
• ADF&G would determine timing windows for in-water work to minimize potential impacts on sensitive fish life stages such as spawning and/or migration periods. Timing windows for in-water work would be incorporated into the construction schedule.
• Construction activities would not result in a migration barrier for resident or anadromous fish. Fish passage would be maintained using temporary stream diversion channels, unless otherwise approved by the ADF&G Division of Habitat. Diversion techniques would likely involve creating a temporary diversion channel, plugging the natural channel upstream and downstream of the construction area, and temporarily rerouting flow into the diversion channel.
• Bridge construction, culvert installation, and earthwork within and near fish-bearing waters would adhere to fish timing windows to avoid impacts on salmonids.
• The access road would have minimal extent of roadside ditches to promote sheet flow of runoff water from the road surface, increasing infiltration and vegetative filtration and thereby reducing impacts to water quality resulting from concentrated runoff.
• Roadside ditches would be designed to accommodate maintenance demands and snow storage.

Mitigation Measures
Due to the Project's small impact on jurisdictional waters, the distribution of the minimal impacts over multiple watersheds, and the extensive avoidance and minimization measures that Graphite One has already performed and committed to, Graphite One proposes no compensatory mitigation for the 2.21 acres of unavoidable permanent impacts of jurisdictional aquatic resource impacts.

Social / Economic Importance

Social or Economic Importance

(18 AAC 70.016(c)(5): Provide information that demonstrates the accommodation of important social or economic development. The applicant shall complete either a social OR economic importance analysis (or both) for each affected community in the area where the receiving water for the proposed discharge is located.

Social Importance Analysis
Education and training

Economic Importance Analysis
Employment, job availability, and salary impacts
Tax base impacts
Commercial activities

Describe Social and/or Economic Importance of the project
Graphite One Inc. is working to develop its Graphite Creek Project to produce high grade Coated Spherical Graphite (CSG) and other value-added products. At present, the U.S. is 100% import-dependent for natural graphite, which appears on the Federal Government's Critical Minerals List. Graphite in its advanced CSG form is essential to electric vehicle batteries as well as energy storage systems. The U.S. Department of Interior (DoI) found that graphite is one of 9 critical minerals that meets all six of the industrial/defense sector criticality indicators identified by the DoI. The World Bank's Climate-Smart Mining Initiative includes graphite among its clean-tech, green-tech materials, projecting global graphite demand to rise 383% between 2020 and 2050.

Description of Social or Economic Importance, if needed

NONE PROVIDED

Comment

NONE PROVIDED

List of Other Permits or Certificates

*Would include but is not restricted to zoning, building, and flood plain permits.

Include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received.

Agency	Type of Approval*	Identification Number	Date Applied	Date Approved	Date Denied
ADNR	Land Use Permit	APMA 2299	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	TWUA	F2022-077, 078, 079, 080	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Land Use Permit	LAS-34100	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Land Use Permit	LAS-34054	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADEC	APDES	AKR06H00N	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADFG	Fish Habitat Permit	FH22-III-0125	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
USACE	Section 404/10	POA-2018-00210	08/15/2025	*NONE PROVIDED*	*NONE PROVIDED*
USFWS	Bald and Golden Eagle Protection Act	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADEC	Air Quality Permit	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADFG	Fish Habitat Permit	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Application for Permits to Mine in Alaska	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Dam Safety Certification	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	ROW, Easement, Surface Use Agreement, TLUP	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Material Sales	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*

Agency	Type of Approval*	Identification Number	Date Applied	Date Approved	Date Denied
ADNR	Tidelands Lease	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Plan of Operations	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Reclamation Plan	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Millsite Lease	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Mining Lease	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*
ADNR	Temporary Water Use application	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*	*NONE PROVIDED*

Other Agency or Local Contacts (1 of 1)

Contact Role
OTHER_REG_CNTCT

Other Agency and or Local Contacts

First Name	Last Name
Kate	Harper

Title
Large Mine Coordinator

Organization Name
ADNR

Phone Type	Number	Extension
Business	907-269-5533	

Email
kate.harper@alaska.gov

Attachments

Copy of Federal Application (USACE, EPA, or FERC, etc.)
G1 DA Permit App Cover Letter.pdf - 11/14/2025 01:48 PM
G1-Project Description_Section 404 Permit Application_REV 0.pdf - 11/14/2025 01:48 PM
USACE ENG Form Graphite Creek Project.pdf - 11/14/2025 01:48 PM
Comment
NONE PROVIDED

Figures and/or Drawings/Plan Sets. To include a map or diagram of the proposed activity site, including the proposed activity boundaries in relation to local streets, roads, and highways.
Mine Overview.jpg - 11/14/2025 01:48 PM
Comment
NONE PROVIDED

Document Attachments
NONE PROVIDED
Comment
NONE PROVIDED

Delegation of Authority for Submission of Application
delegation-of-authority-401-app G1.pdf - 11/14/2025 01:48 PM
Comment
NONE PROVIDED

As per 18 AAC 15.030 signing of applications, all permit or approval applications must be signed as follows:
1) in the case of corporations, by a principal executive officer of at least the level of vice president or his duly authorized representative, if the representative is responsible for the overall management of the project or operation;

2) in the case of a partnership, by a general partner;
3) in the case of a sole proprietorship, by the proprietor; and
4) in the case of a municipal, state, federal or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Agreements and Signature(s)

As per 18 AAC 15.030 signing of applications, all permit or approval applications must be signed as follows:
1) in the case of corporations, by a principal executive officer of at least the level of vice president or his duly authorized representative, if the representative is responsible for the overall management of the project or operation;
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4) in the case of a municipal, state, federal or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
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Signed By Mike Schaffner on 11/17/2025 at 11:42 AM